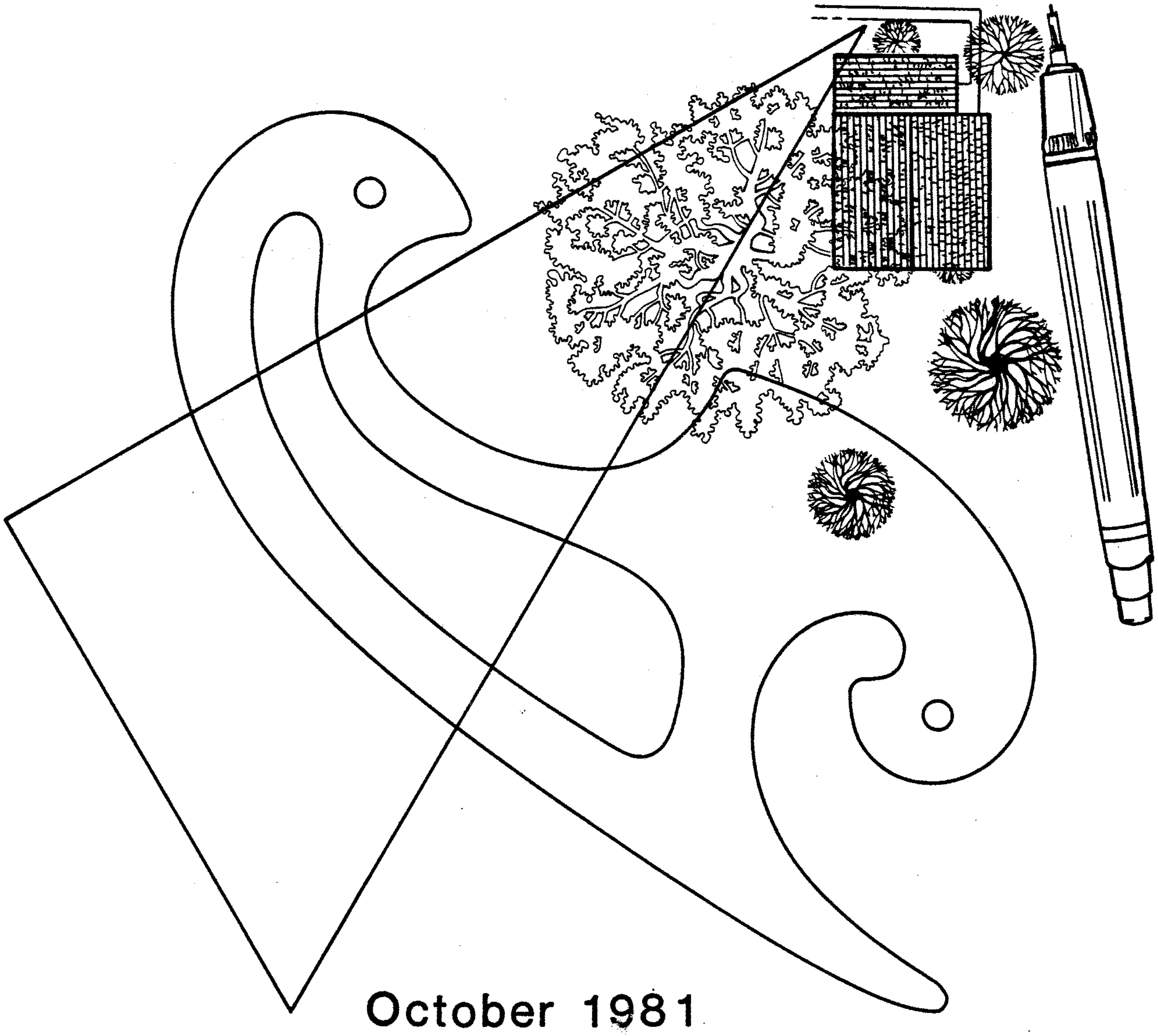
U.S. DEPARTMENT
OF AGRICULTURE

SOIL
CONSERVATION
SERVICE

Updated Study Plan

LOWER SILVER WATERSHED

Santa Clara County, California



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Updated Study Plan
Lower Silver Creek Watershed, California

Introduction

The Lower Silver Creek Preauthorization Report will be used as a starting point of this study. The Preauthorization Report presented broad based alternatives as solutions to the flooding problem, appraised economic feasibility, environmental acceptability and sponsor willingness to implement a selected plan.

Public meetings have been held periodically throughout the sponsors study. Alternative solutions were presented at eight community meetings in October and November of 1974. In December of 1974, the Santa Clara Valley Water District (SCVWD) had a private firm conduct a public opinion poll to obtain public inputs and responses to the project. Based on these inputs, the sponsors developed a plan for flood control only. A report of the proposed project was presented in two community workshops in June of 1975, with formal plan presentations made in February and September of 1977. After consideration of input from these public meetings, a final hearing on the proposed project was held on June 6, 1978. After applying for federal assistance a public meeting was held on June 28, 1979 to solicit additional input and to inform the public of the PL-566 program. As part of the Preauthorization Report, two scoping meetings were held with federal, state and local agencies, and sponsors. A public meeting was held on November 20, 1980 to present the results of the Preauthorization Study to the public and to solicit input for final work plan development.

The project is sponsored by the Santa Clara Valley Water District and the Evergreen Resource Conservation District (ERCD). The sponsors will develop the plan with assistance from the Soil Conservation Service (SCS).

After planning is authorized by the Chief of the SCS, notification will be made to various agencies and groups soliciting their views and inputs. These interagency inputs will be used to supplement the existing studies.

Limits of the Study Area

Approximately 43 square miles (27,700 acres) of Lower Silver Creek and its tributaries will be studied (see Page 9). This watershed is located in the eastern portion of the Santa Clara Valley and partially in the City of San Jose. The urban area comprises about one-half of the watershed and consists primarily of family residences and apartments housing about 175,000 people. The remainder of the watershed is generally undeveloped open space with scattered homes, orchards and ranches.

Problems

The major problem is flooding. About 1,700 homes and/or businesses and public facilities will be inundated at various depths by the one percent chance flood, resulting in estimated damages of $25,000,000. The upper watershed has some erosion and water management problems due to urban development pressures.

Plans of Study and Intensity of Investigation

General work activities to be included in the study are described in the following sections. Man-day estimates and job duties for specific work items for each discipline are attached in Appendix A and can be used as an indicator of the planned level of intensity of the studies being contemplated. The man-day estimates shown reflect total elapsed time, not necessarily actual time spent on an item.

STUDY PLAN - COMPONENTS

I. Develop Updated Study Plan

This study plan has been developed to define the work required to complete the planning process for the Lower Silver Creek work plan and EIS. It will be reviewed with sponsors, other federal agencies, groups and the public. A master schedule has been developed for managing, scheduling and analyzing plan/EIS development (Appendix B). Milestone dates have been established to define critical points and dates in the planning process. The schedule will be periodically updated.

II. Collection of Additional Detailed Biological, Engineering, Economic and Geologic Data

1. Resource Inventory and Environmental Assessment

This will be done in accordance with the "SCS Guide for Environmental Assessment and Resource Inventory Checklist" of the Documentation Guide. The work itself will be done intermittently throughout the plan development phase and will be coordinated with the plan development studies.

Preliminary contact with the regional office of the California Archeological Site Survey indicates that this watershed is an archeologically sensitive area. Previous archaeological studies in eastern Santa Clara County have included field examinations of various portions of Lower Silver Creek. None of the sites reported in these studies will be affected by the project. The reports will be reviewed to find out if the field work covered all proposed construction areas. Any areas not covered will be inspected by a qualified archaeologist. Pertinent information from the various reports will be assembled and submitted to the State Historic Preservation Officer.

Refinement of the wetlands, riparian zone, and flooded area maps will be an on-going process during plan development.

2. Surveys

Existing data including aerial photos, contour maps (1" = 500'), and flood insurance maps (1" = 500') and the USGS Quad maps (1" = 2000') will be used throughout the remainder of the study.

The existing channel and valley surveys will be supplemented with typical sections of the existing channels. Additional surveys of the streets and first floor elevation of the homes will be completed. Field survey work will be done jointly by Santa Clara Valley Water District and SCS personnel.

The Santa Clara Valley Water District will contact the various utilities and provide a map indicating the location of all utilities for the selected plan.

3. Hydrology and Hydraulics

The TR-20 Model will be recalibrated against existing stream gage data and SCVWD regional equations. Adjustments will be made in the TR-20 model to match volumes and peak flows for present conditions, natural watersheds. Adjustments will be made in the runoff curve numbers and times of concentration to account for changes in land use for future and present conditions in the watershed.

The increase in the area of the floodplain from the FIA maps will be evaluated with additional cross-sections in the flood prone area.

The effects of the 500-year flood will be determined in the 100 year flood prone area.

The downstream effects of the proposed action will be evaluated using the SCVWD model of Coyote Creek.

4. Geology and Soils

Where work is planned, field investigations will be made. Samples from representative soils will be obtained and their classification and engineering properties determined by laboratory tests. Entry rights will be obtained by SCVWD.

5. Engineering and Cost Data

Various levels of design Q's will be evaluated for a channel to determine the cost for different levels of protection. The cost per segment will be evaluated to determine channel cost. Nonstructural aspects for the industries will be further evaluated. Various combinations of channel sizes and nonstructural measures will be evaluated to determine the NED plan.

Channel stability will be evaluated using soil test data. Water surface profiles will be completed for the proposed channels using a programmable calculator for the various alternative flows, bank treatments and channel sizes.

Cost estimates will be prepared for various possible measures and these will be used in plan formulation. Unit prices for construction will be based on review of recent SCS contracts and other contracts in the vicinity. Land values and estimates of costs of relocating persons or businesses will be furnished by SCVWD. Operation and maintenance costs will be based on experience of local agencies and on other PL-566 projects in California.

6. Economics

Additional damage interviews will be collected in order to refine damage factors used in the preauthorization report. Additional data will be gathered to increase the house sample size used in the URB 1 computer program. Refined hydrologic data, including additional cross-sections, will also be added to the model over what was used in the preauthorization report. A time frame analysis will be utilized to take into account development patterns and their effects. The model will be rerun to determine the effects of various structural measures. When residual damages occur additional data will be collected to increase the sample size to 100% in order to analyze the effects of non-structural measures.

A study will be completed to determine damages and benefits to the affected transportation system and the cost of emergency services should such a flood event occur.

If the proposed alternatives affect the recreational aspects of Lake Cunningham, a study will be performed to ascertain what those impacts will be in monetary terms.

III. Work Plan Formulation

The various measures already considered in the preauthorization report will be reviewed and evaluated for solving the problems and needs in the watershed. Plans will be developed which maximize national economic development benefits. The selected plan will be modified as appropriate, considering the views of the sponsors, the general public, and other interested agencies and groups. Steering committee and public meetings will be conducted as needed to modify and arrive at a satisfactory plan.

IV. Work Plan and Environmental Impact Statement

After the sponsoring organizations agree on a plan, any needed refinements of the designs and cost estimates will be made. Designs will be done in the degree of detail needed for land rights work maps. Maps showing property lines and ownerships will be furnished by the SCVWD and the land rights work maps will be prepared by the SCS.

Working copies of the plan and environmental impact statement will be prepared and supporting appendices will be compiled. Supporting appendices will include Hydrology, Geology, Environmental Assessment, Engineering, and Economics.

V. In-State Review

The working copies of the plan and EIS will be reviewed by appropriate state SCS staff members. An informal review by the other participating agencies also will be arranged at this time. The unsigned draft plan and EIS will then be prepared.

VI. Additional Reviews and Revisions

The unsigned draft plan and EIS and the supporting appendices will be submitted to the SCS Technical Service Center (TSC) in Portland, Oregon for concurrence. The plan and EIS then will continue through the review process as specified in Chapter 13 of the Watershed Protection Handbook.

VII. Public Participation

A comprehensive public participation plan will be developed early in the planning process and will serve as a guide to insure that (1) information is disseminated to the public and concerned agency personnel in an orderly and timely manner and (2) input from concerned people can be incorporated into the planning process in an ongoing and orderly fashion. Among other things the public participation document will contain plans for:

1. Developing and updating a comprehensive mailing list.
2. Creating an awareness of project activities through the use of TV, radio, and press announcements.
3. Developing a process to insure involvement of all affected people across all political, social, and economic spectrums.
4. Developing technical information papers and news articles by planning staff specialists at specific phases during the planning process.

5. Insuring that citizens' concerns are addressed throughout the planning process through the use of both formal and informal scoping techniques.
6. Insuring continual TSC involvement through the use of field trips and intermediate progress reports at the conclusion of key planning steps.

Cost

Estimated cost of the planning studies is tabulated below. SCS personnel costs are based on man-days of work at their associated GS grade plan plus 30 percent to obtain total Personnel Services and Benefits (O.C. 11.1-13). Estimated costs were calculated for associated travel and contract (O.C. 21, 25.2). Other expenses are estimated to be 15 percent of the Personnel Services and Benefits cost. Local rates are based on $200 per man-day.

Personnel

GS GRADE	RATE	MAN-DAYS*	SCS	SCVWD	ERCD	TOTAL	FY 82	FY 83
4 - 6	$ 98	62	$ 6,080			$ 6,080	$ 4,860	$ 1,220
7 - 9	125	242	30,250			30,250	28,700	1,550
11	167	81	13,530			13,530	12,860	670
12	200	281	56,200			56,200	53,390	2,810
13+	238	153	36,410			36,410	30,500	5,910
Local	200	100		16,000	4,000	20,000	18,000	2,000
Subtotal Personnel Services and Benefits (O.C. 11.1-13)		919	$142,470	16,000	4,000	162,470	148,310	14,160
Travel and Contracts (O.C. 21, 25.2)						16,100	15,770	330
Other Expenses (all other O.C.)						23,400	21,060	2,340
TOTAL PLAN COST						201,970	185,140	16,830

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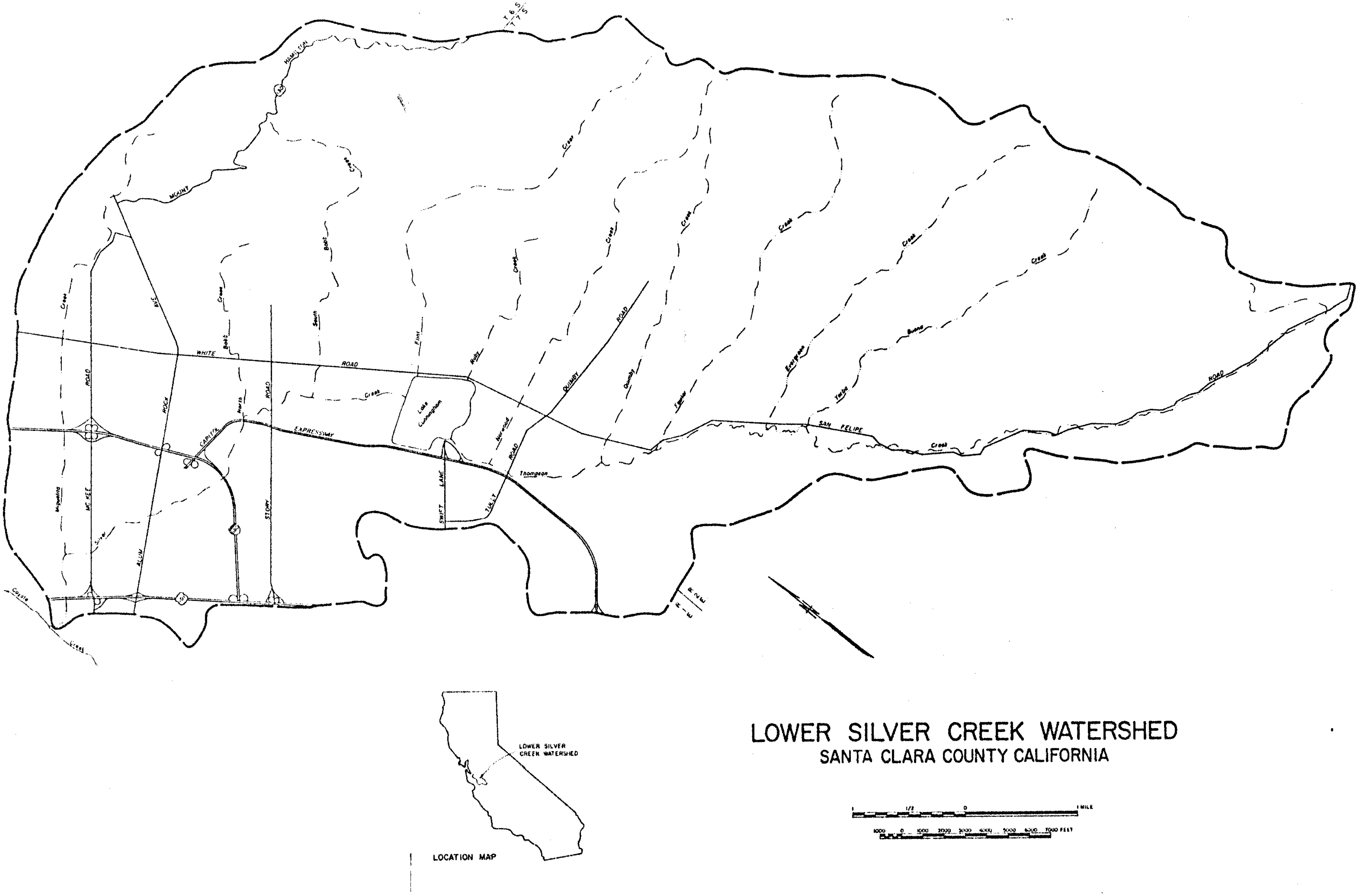
*Man-day is 10 hours. Number of hours reflect estimates of actual time chargeable to this project.



LOWER SILVER CREEK WATERSHED
SANTA CLARA COUNTY CALIFORNIA

APPENDIX A

SUMMARY OF MAN DAY ESTIMATES AND EXPECTED PRODUCTS BY PLANNING STEP
(Elapsed Time)

PLANNING STEPS	10 HOUR MAN DAYS																						EXPECTED PRODUCT OR RESULT WHEN PLANNING STEP IS COMPLETED
	Soil Conservation Service																	Sponsors				TOTALS	
	Watershed Planning Staff									Area				Other									
	Study Leader	Hydrologist	Economist	Engineer	Geologist		Recreation Specialist	Landscape Architect			Area Conservationist	District Conservationist			State Office Staff	WTSC			SCVWD	BRCD			
1. Specify problems and opportunities	10																		2	2		14	- Determine whether recreation will be added as a project purpose.
2. Inventory, forecast, and analysis	3	133	68	20	16	20	8	9				7							8			292	- Determine future w/o project conditions by quantifying and qualifying the watershed's problems and opportunities.
3. Formulate alternatives	6	5	19	41	6	10	3	7				3							4	4		108	- Develop alternatives to address the watershed's problems and opportunities and develop the plan that maximizes NED.
4. Evaluate effects		33	32	43	14	19	4	5				5			5				8			168	- Measure the effects of the various alternatives to solve the watershed's problems or take advantage of its opportunities.
5. Comparison of alternatives	18	4	22	13	2	[illegible]	1	5				1							5			85	- Display the economic, social, and environmental effects and trade-offs of the various alternatives.
6. Plan selection	7	2	7	12	2		1	2			1	6			2				5	4		58	- Select the preferred plan.
7. Writing and reviews	28	13	16	46	10	[illegible]	2	12			4	2			16	25			12	5		270	- Produce a final work plan and EIS after receiving and incorporating comments from the public and concerned governmental agencies.
8. Coordination and consultation	100	10	6	8	2	[illegible]	2	9			9	20			8	5			36	5		249	- An on-going process of communicating with the public and concerned governmental agencies leading to a timely and successful completion of a final plan and EIS.
TOTALS	172	200	170	183	52	175	21	49			14	44			31	30			80	20		1244	

LOWER SILVER CREEK
Watershed, California

Work Outline

SPECIALIST Study Leader
Man-Days 172
Spec. 144
Tech. 28

Sub-work Items

Number	Description	Man-Days Spec.	Man-Days Tech.	Estimated Completion Date
002	Project management (1 day per week during planning period).	44	0	
002.1	Prepare and implement public participation plan.	20	0	
003	Organize collection of additional data for work plan and EIS.			
	a. Make assignments to obtain additional data.	1	0	
	b. Arrange to have relevant data filed.	1	0	
	c. Review results.	1	0	
004	Determine the potential plan elements for final plan.			
	a. Have staff meetings on potential plans to meet needs.	2	0	
	b. Collect summary of design, cost data and effect on potential plans.	2	0	
005	Develop alternative plan (NED, EQ, etc.)			
	a. Meet with staff to select plan elements for all alternatives. Work with sponsors, public and other agencies to develop plans that meet needs.	2	0	— —
	b. Make assignments to compile costs, benefits and effects.	1	0	
	c. List for each alternative plan its contribution and its beneficial and adverse effects.	1	0	
	d. Meet with staff to review results.	1	0	

LOWER SILVER CREEK
Watershed, California

Work Outline

SPECIALIST Study Leader - continued Man-Days ________ Tech. ________

Sub-work Items

Number	Description	Man-Days Spec.	Man-Days Tech.	Estimated Completion Date
006	Evaluate viability aspect of each plan.			
	a. Make staff assignments and hold meeting to accomplish the four planning tests of acceptability, effectiveness, efficiency and completeness.	1	0	
007	Develop displays of alternative plans.			
	a. Organize staff to prepare maps, tables, charts, etc. (These to be suitable for public meetings.)	1	4	
	b. Develop procedure to measure and document public preferences.	2	2	
008	Prepare for public meeting on alternatives.	2	4	
009	Obtain sponsors selection of plan.	3	0	
010	Initiate preparation of "Work Copy" of draft plan and EIS.			
	a. Determine with staff and discuss with STC the need for EIS. If not required complete the environmental assessment summary, obtain TSC concurrence and process Finding of No Significant Impact.	4	0	
	b. Review with staff writing assignments. Agree on schedule and dates.	2	0	
011	Prepare "working copy of plan and EIS".	10	0	
	a. Coordinate completion of plan and EIS.	3	0	
	b. Transmit for informal review by State Office and field staff, FS and other participating agencies.	1	4	
	c. Resolve comments/note changes made.	3	1	

LOWER SILVER CREEK
Watershed, California

Work Outline

SPECIALIST Study Leader - continued Man-Days ________ Tech. ________

Sub-work Items

Number	Description	Man-Days Spec.	Man-Days Tech.	Estimated Completion Date
012	Prepare unsigned draft plan and EIS and have reviewed.	3	4	
	a. Coordinate staff work for rewrite.	1	0	
	b. Send out draft plan and EIS with documentation for TSC review and concurrences and FS area comments.	4	4	
	c. Resolve comments/make needed changes.	2	1	
013	Local reviews by agencies and others and public meetings.			
	a. Complete according to WPH 13.40, 13.41 and 13.42.	5	0	
	b. Prepare displays and brochures and public meetings.	1	4	
	c. Prepare and make public notice of meeting in local newspaper at least 3 different days beginning at least 15 days prior to meeting.	1	0	
014	Interagency reviews.			
	a. Conduct interagency reviews according to WPH 13.422, 13.423 and 13.14.432.	5	0	
	b. Consider all comments, discuss with sponsor and prepare final plan and EIS.	10	0	
	c. Arrange for transmitting to TSC with concurrence.	1	0	
015	Final plan and EIS.			
	a. Present plan and EIS for approval and signature of STC.	1	0	

LOWER SILVER CREEK
Watershed, California

Work Outline

SPECIALIST Study Leader - continued Man-Days ______ Tech. ______

Sub-work Items

Number		Description	Man-Days Spec.	Man-Days Tech.	Estimated Completion Date
015	b.	Assist in transmitting SCS approved plan and EIS to Watershed Division, Washington, D.C.	2	0	

LOWER SILVER CREEK
Watershed, California

Work Outline

			Spec. 14
SPECIALIST	Area Conservationist	Man-Days 14	Tech. 0

Sub-work Items

Number	Description	Man-Days		Estimated Completion Date
		Spec.	Tech.	
001	Coordinate with Planning Staff on updated study plan.	1	0	
002	Project management, public relations, sponsor coordination during planning process (1 day month for planning period).	5	0	
003	Meet with Planning Staff and area staff on alternatives and meeting with sponsors.	1	0	6/7/82
004	Coordination and follow-up on development of work plan and EIS.	2	0	
005	Review of plan on EIS. Prepare comments in docket and coordinate with planning and area staff.	2	0	9/21/82
006	Coordinate public meeting inputs on EIS and plan.	1	0	
007	Review and coordinate final plan inputs of area staff with planning leader.	2	0	

LOWER SILVER CREEK
Watershed, California

Work Outline

Spec. 153

SPECIALIST Biologist Man-Days 178 Tech. 25

Sub-work Items

Number	Description	Man-Days Spec.	Man-Days Tech.	Estimated Completion Date
101	Determine ecological attributes within watershed. Coordinate with landscape architect. Document on Tables 1 & 2 of P&S EQ Manual.	8	0	11/20/81
105	Conduct biological assessment of watershed to quantify habitat units. Coordinate assessment with landscape architect. Delineate wetlands. Conduct inventory of fisheries within Lower Silver and Coyote Creek. Forecast without project conditions. Document on Tables 3 & 4 of P&S EQ Manual.	12	0	12/1/81
106	Ascertain if any impacts will occur upon endangered species within watershed. Determine if any downstream impacts will effect endangered species at confluence with San Francisco Bay. Coordinate with geologist concerning sediment increase into aquatic systems. Prepare biological assessment and submit to USFWS.	12	0	8/2/82
111	Develop biological portions of NED, EQ, and other alternatives.	28	0	2/1/82
113	Evaluate impacts of each alternative plan on biological resource. Determine habitat units lost and/or gained. If necessary, develop mitigation plan. Coordinate any vegetative plantings with landscape architect. Document on Tables 5, 6, 7, 8, 9, and 10 of P&S EQ Manual.	10	0	4/9/82
119A	Prepare biological portions of plan and EIS. Review plan.	16	3	7/7/82
119B	Prepare draft EIS.	20	10	8/20/82

LOWER SILVER CREEK
Watershed, California

Work Outline

SPECIALIST Biologist Man-Days ______ Tech. ______

Sub-work Items

Number	Description	Man-Days Spec.	Man-Days Tech.	Estimated Completion Date
119C	Incorporate watershed staff comments.	6	2	9/7/82
119D	Prepare rewrite of EIS, incorporate staff, State Office, and sponsor comments.	8	2	9/28/82
119E	Incorporate TSC review comments.	8	2	11/7/82
	Prepare and distribute EIS for interagency review.	3	2	12/1/82
119F	Resolve comments and revise EIS after interagency review.	12	2	
119G	Prepare final EIS and distribute.	10	2	

LOWER SILVER CREEK
Watershed, California

Work Outline

Spec. 151

SPECIALIST Economist Man-Days 170 Tech. 19

Sub-work Items

Number	Description	Man-Days Spec.	Man-Days Tech.	Estimated Completion Date
220	Urban Damages: Residential, Commercial and Industrial			
	a. Collect additional base data to supplement existing data base used in P.A. report.	15	0	9/30/81
	b. Survey elevations of additional properties affected by floodwater to supplement that used in P.A. report.	1	12	9/30/81
	c. Interview additional potential and/or historic flood victims, if needed.	9	0	10/16/81
	d. Adjust existing damage schedules for use in URB1, if needed.	6	0	10/30/81
	e. Revise URB1 data to compute average annual urban damages for present and future without project conditions.	18	0	12/15/81
	f. Run URB 1 for all alternatives.	6	0	1/15/82
	g. Evaluate non-structural plan.	16	0	3/20/82
	h. Construct graphic summary displays of danger and benefits.	4	0	3/27/82
230	Compute savings in future costs (by alternative)	4	0	1/15/82
	a. Savings in FIA administrative costs.			
	b. O M & R.			
	c. Padding up (floodproofing)			
233	O M & R of Existing Flood Protection Facilities	2	0	1/20/82
	a. Verify data in P.A. report.			
	b. Collect additional data on O & M of Lake Cunningham.			

LOWER SILVER CREEK
Watershed, California

Work Outline

SPECIALIST Economist Man-Days ________ Tech. ________

Sub-work Items

Number	Description	Man-Days		Estimated Completion Date
		Spec.	Tech.	
236	Sediment Damages (by Reach)	2	0	1/22/82
	a. Evaluate sediment damages to Lake Cunningham.			
	b. Evaluate sediment damages to existing channel system.			
238	Indirect Damages (by Reach)	12	2	2/19/82
	a. Compute damages through information supplied by local units of government or through contact with local unit of government.			
	b. Potential damages to commuter routes as a result of flooding			
	1. physical damage 2. traffic rerouting costs 3. wages lost			
	c. Potential emergency costs in the event of flood.			
	d. Compute benefits by alternative.			
264	Develop NED Alternative	10	2	4/21/82
	a. Scale and select measures for alternatives that maximize net benefits.			
	b. Perform incremental analysis			
	c. Designate NED plan.			
	d. Document in tabular form.			
266	Evaluate economic aspects of each alternative for acceptability, effectiveness, efficiency and completeness.	2	1	4/23/82

LOWER SILVER CREEK
Watershed, California

Work Outline

SPECIALIST Economist Man-Days ______ Tech. ______

Sub-work Items

Number	Description	Man-Days Spec.	Man-Days Tech.	Estimated Completion Date
267	Develop display accounts for all alternatives.	7	0	5/7/82
268	Perform cost allocation and cost sharing.	3	0	5/14/82
270	Obtain sponsor and public's preference.	3	0	6/4/82
271	Modify plans and component needs to reflect sponsor and public preference.	4	0	6/11/82
272	Make additional economic studies as needed. Make additional investigations and computations brought about by Items 270-271. Perform incremental analysis on selected plan.	7	0	6/30/82
273	Prepare economic portions of plan, EIS, and documentation. a. Prepare as assigned, economic portions of the Plan, EIS, etc. b. Assemble all relevant economic documentation in notebooks suitable for review. c. Prepare I&A report. d. Revise EIS based on staff review.	14	2	7/27/82
274	Resolve State Office and WTSC's comments and revise economics accordingly. Prepare and duplicate final documentation material.	4	0	10/10/82
275	Resolve Interagency comments.	2	0	

LOWER SILVER CREEK
Watershed, California

Work Outline

Spec. 148

SPECIALIST Planning Engineer Man-Days 183 Tech. 35

Sub-work Items

Number	Description	Man-Days Spec.	Man-Days Tech.	Estimated Completion Date
403	For any channel segments			4/9/82
	A. Finalize all profile data.	2	3	
	B. Obtain final design discharges from hydrologist.	1	0	
	C. Proportion channel and run necessary water surface profiles.	5	3	
	D. Determine stability using TR-25.	3	0	
	E. Define and design inlet structures and other appurtenances.	5	0	
	F. Identify O & M requirements.	1	0	
	G. Develop quantities by reach.	3	0	
	H. Prepare cost per channel reach.	3	0	
404	For nonstructural measures in evaluation reaches 6 and 7.			11/19/81
	A. From PR data determine need for additional information to develop final plan for individual structures.	2	0	
	B. Develop site specific design for individual buildings.	8	0	
	C. Develop detail quantities by structures.	3	0	
	D. Prepare cost per structure.	5	0	
	E. Identify O & M requirements.	1	0	

LOWER SILVER CREEK
Watershed, California

Work Outline

SPECIALIST Planning Engineer Man-Days ______ Tech. ______

Sub-work Items

Number	Description	Man-Days		Estimated Completion Date
		Spec.	Tech.	
405	Develop alternatives using different combination of structure and channels.	20	0	10/9/81
405.1	Develop recreational needs and cost estimates for all alternatives.	20	0	1/15/82
406	Develop NED, EQ and alternative plans.	16	0	5/14/82
407	Apply Four Planning Test.	3	0	5/20/82
408	Prepare narrative, maps, display, etc. for alternatives.	5	5	6/1/82
409	Modify plans and needs based on sponsors inputs.	2	3	6/11/82
410	Revise displays, drawings, etc.	2	5	6/13/82
411	Prepare plan and EIS material, write required sections. Prepare Tables 1-6.	20	10	7/23/82
411a	Staff review, revisions, State Office review and revisions.	8	0	
412	Revisions after review by WTSC.	5	3	
413	Prepare final and reproduce plan and EIS.	5	3	

LOWER SILVER CREEK
Watershed, California

Work Outline

SPECIALIST Geologist Man-Days 46 Spec. 44 Tech. 2

Sub-work Items

Number	Description	Man-Days Spec.	Man-Days Tech.	Estimated Completion Date
513S	Obtain a printout of water quality data for Coyote Creek from STORET.	2	0	11/30/81
514S	Collect floodplain sediment damage data using city engineer and county maintenance staff interviews. Provide economist this data for an economic evaluation of sediment damages.	4	0	12/15/81
531S	FWOP includes debris basins on tributaries in upper watershed. Check with flood control district on trap efficiency of these basins and recalculate sediment yield from the tributaries with debris basins installed.	8	0	1/2/82
540S	Route sediment through the watershed based on results from work item 531S.			1/23/82
	a. Analyze sediment stored in Lake Cunningham with various volumes of flood storage and recreation pool levels.	6	0	
	b. Evaluate sediment yield to channel (clear vs. sediment laden water) for channel stability analysis in earth-lined sections.	2	0	
	c. Evaluate potential for sediment dropping out of suspension in Lower Silver Creek due to backwater effects of flood flows in Coyote Creek. Determine O & M needed.	4	0	
541S	Estimate sediment yield to San Francisco Bay to provide biologist data as to sediment impacts on species in the Bay.	2	0	4/30/82

LOWER SILVER CREEK
Watershed, California

Work Outline

SPECIALIST Geologist Man-Days ________ Tech. ________

Sub-work Items

Number	Description	Man-Days Spec.	Man-Days Tech.	Estimated Completion Date
545S	Compare new or adjusted alternatives to future w/o project conditions.	4	0	5/7/82
543S	Prepare narrative, displays, etc. for alternatives.	2	0	5/10/82
549S	Copy and bind documentation. Write up methodologies used and bibliography.	4	2	6/15/82
550S	Prepare plan and EIS, write required sections.	4	0	6/22/82
551S	Resolve review comments and revise plan.	2	0	

LOWER SILVER CREEK
Watershed, California

Work Outline

Spec. 174

SPECIALIST Hydrologist Man-Days 200 Tech. 26

Sub-work Items

Number	Description	Man-Days		Estimated Completion Date
		Spec.	Tech.	
607.1	Review existing hydrology documentation.	7	0	9/15/81
607.2	Calibration for TR20 Model	20	0	10/21/81
	-Check TR20 results with SCVWD results and local stream gage data -Set up TR20 for Upper Penitencia and check results with LP3 analysis -Adjust CN as necessary (see item 2) to calibrate TR20 program			
607.3	Present Condition - TR20 Model	13	0	11/6/81
	Curve number			
	-The land use for present conditions is for the year 1976. What year is going to be used for the base year? If it is something other than 1976, a new land use map will have to be developed and CN's and Tc's recalculated.			
	-Present land use CN's are giving too high of a runoff volume when compared with SCVWD regional volumes for "natural" watersheds. The RCN's may need to be adjusted to match the Contra Costa CN's (page 9.8 NEH 4). May also be adjusted depending on outcome of item 8.			
	Rainfall	7	0	
	-Check precipitation - Bill M. used precip. from State of Calif. Study; this needs to be checked with values from NOAA Atlas 2, unbiased analysis of precip. stations, and SCVWD regional precip. values.			
	-Select appropriate source and use in TR20.			

LOWER SILVER CREEK
Watershed, California

Work Outline

SPECIALIST Hydrologist Man-Days ________ Tech. ________

Sub-work Items

Number	Description	Man-Days Spec.	Man-Days Tech.	Estimated Completion Date
	Time of Concentration	3	0	
	- Tc's need to be reviewed for consistency and compared with values used by SCVWD			
	Routing Coefficient	10	4	
	- Bill Merkel used constant routing coefficients; a variable coefficient should be used for a work plan intensity of study. A rating table will have to be made for each reach routing. Each cross-section will have to be plotted.			
	Complete base maps; subarea, hydrologic soil groups, land use TR20 schematic	0	8	
	Enter revised data into TR20 model and run	7	0	
607.4	Resolve dispute between SCS and SCVWD on which hydrology to use. May include a meeting between TSC, SCVWD, and SCS hydrologist to obtain consensus on which method to use.	10	0	11/25/81
607.5	Present Condition - floodplain mapping and hydraulics.	13	4	10/9/81
	- review cross-section used for URB1 program			——
	- check F.I.S. contractor documentation for sheet flow areas			
	- set up WSP2 for overflow area - plot			
607.6	Future Condition - TR20 Model			12/1/81
	Curve numbers			
	- revise CN for future land use	3	0	

LOWER SILVER CREEK
Watershed, California

Work Outline

SPECIALIST Hydrologist Man-Days ________ Tech. ________

Sub-work Items

Number	Description	Man-Days		Estimated Completion Date
		Spec.	Tech.	
	Time of Concentration	3	0	
	- revise Tc's for future land use			
	Routing Coefficients			
	- enter in revised rating tables	3	0	
	- reservoirs - revise storage discharge tables	2	0	
	- complete base maps - land use	3	0	
	- make changes in TR20 and run	4	0	
607.7	Future Condition - floodplain mapping and hydraulics			12/15/81
	- revise floodplain as needed to reflect changes in flow-frequency	7	0	
	- plot on base map 1" = 500'	3	2	
607.8	Alternative Analysis	13	0	1/8/82
	- Modify TR20 input to account for one additional time frame. Assume 100-year design for channel, and three storage volumes in Lake Cunningham. Give flow-frequency curves to economist for URB1 program.			
607.9	Determine impact of selected project on Coyote Creek and San Francisco Bay	3	0	3/1/82
607.10	Determine effects of 500-year flood with project (no map)	7	0	3/12/82
607.11	Map 100-year residual floodplain using future hydrology and with selected project. Draft on suitable scale map.	20	8	4/22/82

LOWER SILVER CREEK
Watershed, California

Work Outline

SPECIALIST Hydrologist Man-Days ______ Tech. ______

Sub-work Items

Number	Description	Man-Days Spec.	Man-Days Tech.	Estimated Completion Date
607.12	Assemble documentation file for WTSC review.	3	0	6/16/81
607.13	Prepare I & A report.	3	0	6/23/82
607.14	Writing for work plan.	7	0	7/2/82

LOWER SILVER CREEK
Watershed, California

Work Outline

				Spec.	44
SPECIALIST	District Conservationist	Man-Days	44	Tech.	0

Sub-work Items

Number	Description	Man-Days		Estimated Completion Date
		Spec.	Tech.	
700	Public relations, public involvement and information throughout the planning process (2 days per month).	16	0	
702	Assist in collection of additional data for work plan and EIS.	7	0	
703	Serve as member on assessment team for evaluating alternative impacts.	5	0	
704	Assist sponsors with plan formulation. Provide inputs to watershed planning as local sponsor desires. Meet with sponsors to assist in alternate solutions, etc.	5	0	
705	Provide inputs, as required, to the plan and EIS write up and assist in development of selected plan.	5	0	7/15/82
706	Review of plan and EIS, provide modifications, as required.	2	0	7/28/82
707	Assist in scoping and public meetings on final plan and on interagency review.	4	0	

LOWER SILVER CREEK
Watershed, California

Work Outline

Spec. 21

SPECIALIST Recreation Specialist Man-Days 21 Tech. 0

Sub-work Items

Number	Description	Man-Days Spec.	Man-Days Tech.	Estimated Completion Date
305-309	Utilizing data compiled by the City of San Jose on Lake Cunningham, extract demand/supply information, planned recreational facilities for the Lake and anticipated user days.	4	0	10/23/81
317	Obtain from the City, the timing of the installation of the recreational facilities at Lake Cunningham without a PL-566 project.	4	0	10/30/81
321	Working with city officials determine the type, quantity and timing of installation of recreation facilities at Lake Cunningham utilizing PL-566 financial assistance, assuming different lake level elevations.	6	0	11/6/81
322	Calculate user day values for the types of facilities planned in both the with and without project scenerios.	2	0	12/1/81
322A	Determine discounted beneficial effects for the with and without project scenerios.	3	0	12/8/81
327	Prepare recreation portions of plan and EIS and I and A report.	2	0	6/15/82

LOWER SILVER CREEK
Watershed, California

Work Outline

SPECIALIST Landscape Architect Man-Days 49 Spec. 40 Tech. 9

Sub-work Items

Number	Description	Man-Days Spec.	Man-Days Tech.	Estimated Completion Date
901	Collect necessary base data, establish contacts with sponsors.	4	0	
905	Conduct landscape resource assessment and establish priorities.	4	0	
907	Evaluate proposed project impacts.	3	0	
925	Formulate alternatives to reduce, eliminate, or mitigate adverse impacts.	9	0	
929	Assist in preparation of public participation plan, attend meetings.	3	2	
930	Meet with sponsors and interested individuals, incorporate comments.	2	0	
940	Assist planning engineers/specialists with preliminary project design.	2	0	
944	Address recreation potentials and opportunities, coordinate with study leader and sponsors.	2	0	
950	Assist in EIS preparation: narrative, O&M, sketchs, plans, sections, cost estimate.	5	5	
955	Prepare backup data for submission to TSC.	1	0	——
960	Revise EIS after TSC review.	3	1	
965	Revise EIS after interagency review.	2	1	

APPENDIX B

1/TEAM LEADER DUTIES WILL BE SHARED BY THE PLANNING STAFF LEADER AND THE ECONOMIST

LOWER SILVER CREEK WORKPLAN AND EIS
SCHEDULE OF WORK ACTIVITIES

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Designed D.D
Drawn Z.POPAL Date 10/81
Traced
Checked B.WON
Approved by
Title
Title
Sheet No. of
Drawing No.

SCS-ENG-313 REV 5-75